

Remarks

Applicants respectfully request that the Examiner reconsider the present application in light of the above amendments and following remarks. Claims 8, 11, 13, 14 and 15 have been amended and claims 18-20 have been added. Claims 7 and 12 have been cancelled without prejudice or disclaimer. Therefore, claims 8-11 and 13-20 are pending in the present application.

Claim 13 has been rewritten in independent form to include the limitations from claims 7 and 12. As such, claims 7 and 12 have been cancelled. Since claim 7 has been cancelled, claims 8, 11, 14 and 15 have been amended to change their dependency from claim 7 to claim 13.

Applicants submit herewith a formalized version of FIGS. 1-3 that were originally filed with the present patent application. Applicants respectfully request that the formalized drawings be accepted.

Claim 14 has been objected to because of the following recitation: "mounting a coolant temperature sensor extending into the coolant passage". In response to the Examiner's objection, Applicants amended this portion of claim 14 to state: "and a coolant temperature sensor mounted to said crossover and extending into the cooling passage". As such, Applicants request that the rejection of claim 14 be withdrawn.

Claims 7-13 and 15 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,040,493 to Gajewski et al. ("the Gajewski reference") in view of U.S. Patent No. 4,938,176 to Tanaka et al. ("the Tanaka reference"). Claims 7 and 12 have been cancelled, therefore the rejection of

these claims is moot. Applicants respectfully traverse the rejections to the remaining claims.

Claim 13 is directed to an external coolant conduit coolant assembly for connection between engine components in a coolant circuit of an engine. The coolant conduit assembly includes a conduit member, an electrical generating device and an EGR valve. The conduit member is mountable with the components and defines a coolant passage that extends between an inlet and an outlet in the conduit member. The electrical generating device is mounted with the conduit member in heat transmitting relation to the coolant passage intermediate the inlet and outlet. The EGR valve has a valve body portion mounted in the conduit member that extends in heat exchange relation to the coolant passage intermediate the inlet and outlet. The EGR valve is operable to control exhaust gas flow between inlet and outlet ports in the conduit member.

None of the references of record, taken alone or in combination, teach or suggest an external conduit assembly including an EGR valve having a valve body that is in heat exchange relation to a coolant passage as recited in claim 13. As stated by the Examiner, the Gajewski reference does not disclose an EGR valve mounted to a conduit member. See *Final Office Action*, pg. 5. With regard to the Tanaka reference, it includes an EGR valve (12) mounted to a flange (7) using a pair of stud bolts (17). See *Tanaka*, FIG. 6. In particular, the bolts (17) extend through the body (13) of the EGR valve (12) and are screwed into the flange (7) using a threaded connection (9a). See *Tanaka*, FIGS. 3, 5, 6.

In the Final Office Action, the Examiner stated that the EGR valve (12) is

in heat transmitting relation to the cooling passage (11) by the radiation, convection and conduction of heat through the valve body (13), stud bolts (13), and the flange (7). -See *Final Office Action*, pg. 3. While the Tanaka reference may include a coolant passage (11) for cooling the threaded boltholes (17) of the flange (7), Applicants submit that there is no appreciable amount of heat exchanged between the valve body (13) and the coolant contained within the coolant passage (11). First, the Tanaka reference states that a forced flow of coolant within a coolant passage (11) causes only the portions in the vicinity of the boltholes (9) of the flange (7) to be cooled (i.e., local cooling). See Col. 3, lines 9-14, 22-25 (emphasis added). The Tanaka reference goes on to state that only a small amount of coolant is required to cool the boltholes (9a), therefore suggesting that the Tanaka reference does not in any way contemplate the cooling of the valve body (13). See Col. 3, lines 22-25. Therefore, the coolant contained within the coolant passage (11) only exchanges heat contained within the boltholes (9) of the flange (7).

Second, the arrangement of the coolant passage (11) in the Tanaka reference does not provide for the same advantages as achieved by the arrangement in the present invention. In the present invention, the EGR valve body is in heat exchange relation to a coolant passage to cool the exhaust gas passing through the EGR valve. See *Specification*, pg. 5, lines 22-25. As stated above with respect to the Tanaka reference, the coolant in the coolant passage (11) involves only local cooling in the vicinity of the boltholes (9). See Col. 3, lines 22-25. Thus, the coolant passage (11) in the Tanaka reference does not

cool the exhaust gas flowing through the EGR valve (12) as in the present invention.

For at least the foregoing reasons, Applicants request that the rejection of claim 13 be withdrawn. As claims 8-11 and 15 depend either directly or indirectly from claim 13, Applicants request that the rejection of these claims also be withdrawn for at least the same reasons set forth with respect to claim 13.

Applicants acknowledge that claim 14 has been objected to as being dependent upon a rejected base claim, but the Examiner indicated that it would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants also acknowledge that claims 16 and 17 have been allowed.

New claims 18 and 19 include additional features that further distinguish the present invention from the references of record. For example, claim 18 states that the coolant passage includes a branch passage that at least partially surrounds the EGR valve. Further, claim 19 states that the valve body portion of the EGR valve extends in direct heat exchange relation to the coolant passage. Neither the Gajewski reference nor the Tanaka reference teach or suggest these particular features.

Moreover, new claim 20 is directed to an external coolant conduit coolant assembly for connection between engine components in a coolant circuit of an engine. The coolant conduit assembly includes a conduit member, an electrical generating device and a second heat transmitting engine accessory. The conduit member is mountable with the components and defines a coolant passage that

extends between an inlet and an outlet in the conduit member. The electrical generating device is mounted with the conduit member in heat transmitting relation to the coolant passage intermediate the inlet and outlet. The second heat transmitting engine accessory is integrally mounted in the conduit member in heat transmitting relation to the coolant passage intermediate the inlet and outlet.

By integrating the second heat transmitting engine accessory in the conduit member, numerous advantages are realized. For instance, the integration of the second heat transmitting engine accessory in the conduit member eliminates many parts from the total assembly, such as the bolts (17) present in the Tanaka reference. *See Specification*, pg. 3, lines 25-26. The reduction of these parts reduces system cost, assembly time, mass and potential coolant leak paths. *See id.* at lines 28-29.

Conclusion

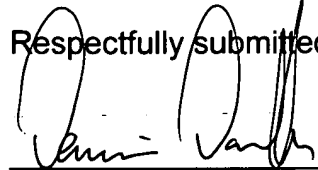
In light of the foregoing, Applicants submit that claims 8-11 and 13-20 are in condition for allowance and such allowance is respectfully requested. Should the Examiner feel that any unresolved issues remain in this case, the undersigned may be contacted at the telephone number listed below to arrange for an issue resolving conference.

Applicants do not believe that any fees are due at this time, however, the Commissioner is hereby authorized to charge any fees that may have been

overlooked that may be due, to Deposit Account No. 10-0223.

Respectfully submitted,

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Dennis B. Danella
Reg. No. 46,653

JAECKLE FLEISCHMANN & MUGEL, L.L.P.
39 State Street
Suite 200
Rochester, New York 14614-1310
Tel: (585) 262-3640
Fax: (585) 262-4133